Possible Key Points for Executive Summary, Review of Black Carbon Report to Congress:

- The Report is comprehensive and well-written, and summarizes much of the relevant scientific literature on the nature of black carbon (BC) particles; their formation, transformation and transport in the atmosphere; associated climate and health impacts; and possible mitigation technologies.
- Given the complexity of the topic, the Panel recommends that a glossary of terms be included early in the document, as a complement to the Report's successful use of text boxes (and figures?).
- Some additional references are suggested to expand the discussion of emissions from shipping, and impacts of BC on the Arctic and other sensitive regions…
- The discussion of BC climate impacts should focus more on measures of climate response, rather than on changes in radiative forcing, so that a broader set of impacts are considered and presented in terms that are meaningful to the generalist reader.
- In the discussion comparing BC to long-lived greenhouse gases (GHG) such as carbon dioxide, the Report should be clear that the analysis does not consider complex interactions between BC and GHGs with ecosystems…
- The Report should expand the discussion of health effects associated with BC, drawing upon the PM, traffic emissions and other relevant literature, and highlight the considerable health benefits that would derive from reductions in BC emissions. This health co-benefit may exceed climate-mediated benefits.
- The Report should have an additional chapter to present a more rigorous treatment of benefits and costs, and associated uncertainties, of BC mitigation to inform policy.
- Although the Report discusses uncertainties associated with emissions estimates and associated changes in radiative forcing, it fails to communicate what the total weight of evidence suggests concerning the uncertainties associated with BC. In other words, after considering uncertainties and remaining knowledge gaps, do the data suggest that the U.S. should do more, less, or the same to control BC emissions?
- Based on available data, we suggest an affirmative statement that BC appears to warm climate and should be controlled on both health and climate grounds.
- The observed long-term BC downward trends are an important finding that should be given greater emphasis; the data provide evidence that emission reduction efforts (to attain the NAAQS for PM and other pollutants) are working.
- The discussion of mitigation approaches should include a broader range of policies, including policies that could influence demand for vehicle use generally, modal substitution, efficiency, electrification using wind/water/solar (WWS), and improved engine technologies.
- An important area of future research is on which BC mitigation strategies are most cost-effective and beneficial for public health and climate, including mitigation within and across sectors, and mitigation to reduce climate impacts in sensitive regions.
- The Report should articulate possible benefits to pursuing a goal of reducing short-term climate change or slowing the rate of change, as a complement to the existing policy goal of limiting the long-term increase in global mean temperature. The discussion of metrics should discuss how policy goals will influence the selection of appropriate metrics.